UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,808	02/28/2002	Younes Jalali	68.0303	3260

7590   08/26/2005

Schlumberger Technology Corporation
14910 Airline Road
P.O. Box 1590
Rosharon, TX 77583-1590

EXAMINER
LUU, CUONG V

ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		10/085,808	JALALI ET AL.
		Examiner	Art Unit	
		Cuong V. Luu	2128	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE __3__ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _28 February 2002_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-35_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-35_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _07/26/2002_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _8/13/2004_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claims 1-35 have been examined. Claims 1-35 have been rejected.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 7, 10-11, 13, 20-21, 24-25, and 27 are provisionally rejected under the judicially created doctrine of double patenting over claim 1, 3-7, 10, 13, and 25 of copending Application No. 09952178. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

1. As per claim 1, in claims 1 and 4 of application No. 09952178 Jalali et al teach a method of determining a configuration of a well, comprising:

receiving, at a first module executable in a system, input data relating to characteristics

of a reservoir and a well surface arrangement;

selecting, by the first module based on the input data, a trajectory of a wellbore in the

well, a type of interface between the reservoir and the wellbore, and completion equipment

for installation in the wellbore.

2. As per claim 3, in claim 3 of application No. 09952178 Jalali et al teach determining if the

well is to be a multilateral well based on the input data.

3. As per claim 7, in claim 5 of application No. 09952178 Jalali et al teach selecting the well

trajectory comprises selecting one of a vertical well, a slant well, and a horizontal well.

4. As per claims 10 and 11, in claim 7 of application No. 09952178 Jalali et al teach these

limitations.

5. As per claim 13, in claim 10 of application No. 09952178 Jalali et al teach this limitation.

6. As per claim 20, in claims 4, and 25 of application No. 09952178 Jalali et al teach these

limitations.

7. As per claim 21, in claims 3, and 25 of application No. 09952178 Jalali et al teach these

limitations.

8. As per claims 24 and 25, in claims 3, 6, 7, and 25 of application No. 09952178 Jalali et al

teach these limitations.

9. As per claims 27, in claims 13 and 25 of application No. 09952178 Jalali et al teach these

limitations.

Furthermore, there is no apparent reason why applicant would be prevented from

presenting claims corresponding to those of the instant application in the other copending

application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP

§ 804.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claims 32-35 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-

statutory subject matter. The Examiner submits that Applicant's have not <u>recited</u> any limitations

relating to a practical application in the technological arts and have merely claimed a

manipulation of abstract ideas (see MPEP 2106).

Section 2106 [R-2] (Patentable Subject Matter - Computer-Related Inventions) of the MPEP

recites the following:

"In practical terms, claims define nonstatutory processes if they:

*- consist solely of mathematical operations without some claimed practical application
(i.e., executing a "mathematical algorithm"); or
- <u>simply manipulate abstract ideas</u>, e.g., a bid (Schrader, 22 F.3d at 293-94, 30
USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31
USPQ2d at 1759), <u>without some claimed practical application.</u>"*

*An invention which is eligible for patenting under 35 U.S.C. § 101 is in the "useful arts" when it
is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and
useful result. The fundamental test for patent eligibility is thus to determine whether the claimed invention
produces a "**useful, concrete and tangible result.**" The test for practical application as applied by the
examiner involves the determination of the following factors:*

(1) *"Useful"* - The Supreme Court in Diamond v. Diehr requires that the examiner look at
the claimed invention as a whole and compare any asserted utility with the claimed invention to
determine whether the asserted utility is accomplished.

(2) *"Tangible"* - Applying In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir.
1994), the examiner will determine whether there is simply a mathematical construct claimed,
such as a disembodied data structure and method of making it. If so, the claim involves no
more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. §
101. In Warmerdam the abstract idea of a data structure became capable of producing a useful
result when it was fixed in a tangible medium, which enabled its functionality to be realized.

(3) *"Concrete"* - Another consideration is whether the invention produces a "concrete"
result. Usually, this question arises when a result cannot be assured. An appropriate rejection
under 35 U.S.C. § 101 should be accompanied by a lack of enablement rejection, because the
invention cannot operate as intended without undue experimentation.

1. As per claim 32, the Examiner respectfully submits, under current PTO practice, that the

    claimed invention does not recite either a useful, concrete, or tangible result and is merely

    drawn to a manipulation of abstract ideas.

    -   The invention is not useful since the claimed "a system comprising" does not recite a

        <u>result</u> (post process) that is useful in the technological art. This makes it difficult to

        determine the Applicant's invention since it merely claims a manipulation of abstract

        ideas. (The patent eligibility standard requires **significant functionality to be**

        present to satisfy the useful result aspect of the practical application requirement.

        See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036.)

    -   The claims are not tangible since the result of the system is undefined.

    -   The claims are not concrete because the results are not assured.

2. Dependent claims 33-35 inherit the defect as being dependent on independent claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis

for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-6, 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Economides et

al (Petroleum Production Systems, Prentice Hall Petroleum Engineering Series, 1994, ISBN 0-

13-658683-X).

3. As per claim 1, Economides et al teach a method of determining a configuration of a well,

comprising:

receiving, at a first module executable in a system, input data relating to characteristics

of a reservoir and a well surface arrangement (p. 2, paragraphs 2,4 and p. 581, paragraph

4; in paragraph 2 of p. 2, Economides et al cite "it is first necessary to understand important

parameters that control the performance and the character of the system". The examiner

interprets it as collecting and receiving data relating to the reservoir's characteristics as in

paragraph 4 of p. 2, and well surface arrangement as in paragraph 4 of p. 581, which

indicates that information about the surface has to be received for design consideration of

wells); and

selecting, by the first module based on the input data, a trajectory of a wellbore in the

well, a type of interface between the reservoir and the wellbore, and completion equipment

for installation in the wellbore (p. 2, paragraphs 5-7; p. 119, paragraph 1; pp. 224-227).

4. As per claim 5, Economides et al teach receiving input data relating to the characteristics of

the reservoir comprises receiving data relating a permeability of the reservoir (p. 36,

paragraph 6).

5. As per claim 6, Economides et al teach receiving input data relating to the well surface

arrangement comprises receiving an indication of whether the well surface arrangement is a

an offshore well with a surface platform (p. 581, paragraph 4).

6. As per claim 8, Economides et al teach selecting one of an open hole completion, a cased

hole completion, and a slotted liner completion (pp. 8-9, paragraphs 3-5; Fig. 1-5).

7. As per claim 9, Economides et al teach receiving input data relating to whether a formation

containing the reservoir is a sandstone formation, wherein selecting the type of interface is

further based on receiving the input data relating to the formation (p. 119, paragraphs 1-2).

8. As per claim 10, Economides et al teach selecting the completion equipment comprises

selecting an arrangement of a lower completion in the well (p. 119, paragraphs 1-2).

9. As per claim 11, Economides et al teach selecting the arrangement of the lower completion

comprises selecting a type of sand control arrangement (p. 119, paragraphs 1-2).

10. As per claim 12, Economides et al teach selecting a type of artificial lift system (p. 9,

paragraph 3).

11. As per claim 13, Economides et al teach selecting at least one of a flow control device (pp.

223, paragraph 5-6, pp. 224-225, Table 10-1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under

35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to

the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a later invention

was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and

potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 7, 14, 20, 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Economides et al as applied to claims 1 and 6 above, and further in view of Todd et al (U.S. Patent 6,745,159 B1).

12. As per claim 2, Economides et al do not teach displaying an output representing the selected wellbore trajectory, type of interface, and completion equipment in a user interface of the system.

However, Todd et al teach displaying output, representing data received (col. 5, lines 1-5).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Todd et al. Todd et al's teaching of displaying output representing data received would visually have provided designers information so that they can easily and quickly design or modify a completion.

13. As per claim 7, Economides et al do not teach selecting the well trajectory comprises selecting one of a vertical well, a slant well, and a horizontal well.

However, Todd et al teach this feature (col. 5, lines 9-18).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Todd et al. Todd et al's teaching of selecting the well trajectory comprises selecting one of a vertical well, a slant well, and a horizontal well would have helped provide the best type of well for a certain reservoir to optimize production of oil.

14. As per claim 14, Economides et al do not teach refining a proposed configuration generated

by the first module, the proposed configuration comprising the well trajectory, the reservoir-

wellbore interface, and the completion equipment.

However, Todd et al teach refining a configuration comprising the well trajectory, the

reservoir-wellbore interface, and the completion equipment (col. 4, lines 16-21).

It would have been obvious to one of ordinary skill in the art to combine the teachings of

Economides et al and Todd et al. Todd et al's teaching of refining a configuration comprising

the well trajectory, the reservoir-wellbore interface, and the completion equipment would

have helped provided a better method to design a configuration, comprising the well

trajectory, the reservoir-wellbore interface, and the completion equipment, to achieve better

designs of wells for higher oil production at low cost.

15. As per claim 20, Economides et al teach these features below as discussed in claim 1.

receive input data relating to characteristics of a reservoir and a well surface

arrangement; and

generate a proposed configuration of the well using a rule-based analysis, the proposed

configuration including a trajectory of a wellbore in the well, a type of interface between the

reservoir and the wellbore, and completion equipment for installation in the wellbore based

on the input data.

However, Economides et al do not teach an article comprising at least one storage

medium containing instructions for determining a configuration of a well, the instructions

when executed causing a system to perform features mentioned above.

Todd et al teach an article comprising at least one storage medium containing instructions when executed causing a system to perform desired functions (col. 6, lines 20-21).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Todd et al. Todd et al's teaching of an article comprising at least one storage medium containing instructions when executed causing a system to perform desired functions would have helped designers to perform their designing tasks faster and more accurately.

16. As per claim 22, Economides et al teach receiving data relating a permeability of the reservoir as discussed in claim 5 above.

However, Economides et al do not teach instructions when executed cause the system to receive the input data relating to the characteristics of the reservoir.

Todd et al teach instructions when executed causing a system to perform desired functions (col. 6, lines 20-21).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Todd et al. Todd et al's teaching of an article comprising at least one storage medium containing instructions when executed causing a system to perform desired functions would have helped designers to perform their designing tasks faster and more accurately.

17. As per claim 23, Economides et al teach receiving input data relating to the well surface arrangement by receiving an indication of whether the well surface arrangement is an offshore well with a surface platform as discussed in claim 6 above.

Economides et al do not teach the instructions when executed cause the system to receive input data.

Todd et al teach instructions when executed causing a system to perform desired functions (col. 6, lines 20-21).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Todd et al. Todd et al's teaching of an article comprising at least one storage medium containing instructions when executed causing a system to perform desired functions would have helped designers to perform their designing tasks faster and more accurately.

18. As per claim 24, these limitations have already been discussed in claims 10. They are, therefore, rejected for the same reasons.

19. As per claim 25, these limitations have already been discussed in claims 11. They are, therefore, rejected for the same reasons.

20. As per claim 26, these limitations have already been discussed in claims 12. They are, therefore, rejected for the same reasons.

21. As per claim 27, these limitations have already been discussed in claims 13. They are, therefore, rejected for the same reasons.

22. As per claim 28, these limitations have already been discussed in claims 14. They are, therefore, rejected for the same reasons.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Economides et al as applied to claim 1 above, and further in view of Donovan et al (U.S. Patent 5762149).

23. As per claim 3, Economides et al do not teach determining if the well is to be a multilateral well based on the input data.

However, Donovan et al teach this feature (col. 6, lines 66-67; col. 7, lines 1-20).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Donovan et al. Donovan et al's teaching of determining if the well is to be a multilateral well based on the input data would have provided an essential step in the method to prepare for a well design which would save valuable time and cost.

24. As per claim 4, Economides et al do not teach determining if the well is to be a multilateral well based on the reservoir is a layered reservoir.

However, Donovan et al teach this feature (col. 7, lines 18-24. Donovan et al recite, "Placement of some branches is dependent on the location of the reservoirs. The examiner interprets it as including layered reservoir).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Donovan et al. Donovan et al's teaching of determining if the well is to be a multilateral well based on the reservoir is a layered reservoir would have provided an essential step in the method to prepare for a well design which would save valuable time and cost.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Economides et al as

applied to claim 20 above, and further in view of Todd et al (U.S. Patent 6,745,159 B1) and

Donovan et al (U.S. Patent 5762149).

25. As per claim 21, Economides et al do not teach the instructions when executed cause the

system to further determine, based on the input data, if the well is to be a multilateral well.

Todd et al teach instructions when executed causing a system to perform desired

functions (col. 6, lines 20-21).

Donovan et al teach determining if the well is to be a multilateral well based on the input

data (col. 6, lines 66-67; col. 7, lines 1-20).

It would have been obvious to one of ordinary skill in the art to combine the teachings of

Economides et al, Todd et al, and Donovan et al. Donovan et al's teaching of determining if

the well is to be a multilateral well based on the input data and Todd el al's teaching of

instructions when executed causing a system to perform desired functions would have

provided an essential step in the method to prepare for a well design which would save

valuable time and cost and helped designers to perform their designing tasks faster and

more accurately.

Claims 15-19, 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Economides et al as applied to claims 1, 14, and 28 above, and further in view of Todd et al

(U.S. Patent 6,745,159 B1) and Thomas et al (U.S. Patent 6853921 B2).

26. As per claim 15, Economides et al and Todd et al do not teach refining the proposed

configuration, comprising determining a position of completion equipment.

However, Thomas et al teach determining a position of completion equipment (col. 6, lines 34-40).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al, Todd et al, and Thomas et al. Thomas et al's teaching of determining placement of the well with the proposed well trajectory in the reservoir would have helped designers refine the proposed configuration with a better placement of the well with the proposed well trajectory in the reservoir for more efficient oil production.

27. As per claim 16, Economides et al and Todd et al do not teach refining the proposed configuration is based on a predefined performance measure.

However, Thomas et al teach an optimizer module executable on the processor to adjust or refine the performance of oil production (col. 9 63-67; col. 10, lines 1-6).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al, Todd et al, and Thomas et al. Thomas et al's teaching of an optimizer module executable on the processor to adjust or refine the production of oil would have been applied to help refine the proposed configuration based on performance to boost the oil production.

28. As per claim 17, Economides et al and Todd et al do not teach refining the proposed configuration is based on a target production rate.

Thomas et al teach adjusting or refining positions of valves based on a target production rate (col. 6, lines 34-40).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al, Todd et al, and Thomas et al. Thomas et al's teaching of adjusting or

refining positions of valves based on a target production rate would have been applied to

help refine the proposed configuration based on a target production rate to optimize the oil

production.

29. As per claim 18, Economides et al and Todd et al do not teach invoking a simulator to

assess performance of the proposed configuration.

Thomas et al teach invoking a simulator to assess the performance measure of oil

production (col. 6, lines 7-16).

It would have been obvious to one of ordinary skill in the art to combine the teachings of

Economides et al, Todd et al, and Thomas et al. Thomas et al's teaching of invoking a

simulator assess performance measure of oil production would have been applied to help

assess performance of the proposed configuration in order to determine if the proposal

would need to be modified to optimize the oil production.

30. As per claim 19, Economides et al and Todd et al invoking an economics tool to determine

effect of the proposed configuration on a predefined economic measure.

Thomas et al teach invoking an economics tool to assess the performance of oil wells

(col. 9, lines 60-16).

It would have been obvious to one of ordinary skill in the art to combine the teachings of

Economides et al, Todd et al, and Thomas et al. Thomas et al's teaching of invoking an

economics tool to assess the performance of oil wells would have been helped determine

effect of the proposed configuration on a predefined economic measure to determine if the

proposal is cost effective.

31. As per claim 29, these limitations have already been discussed in claims 15. They are,

therefore, rejected for the same reasons.

32. As per claim 30, these limitations have already been discussed in claims 16. They are,

therefore, rejected for the same reasons.

33. As per claim 31, these limitations have already been discussed in claims 18. They are,

therefore, rejected for the same reasons.

Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Economides et al

in view of Thomas et al (U.S. Patent 6,853,921 B2).

34. As per claim 32, Economides et al a system comprising:

receiving input data relating to characteristics of a reservoir and a well surface

arrangement,

generating a proposed configuration of the well, the proposed configuration including a

trajectory of a wellbore in the well, a type of interface between the reservoir and the

wellbore, and completion equipment for installation in the wellbore based on the input data.

Economides et al, however, do not teach a processor and one or more modules

executable on the processor to perform tasks mentioned above.

Thomas et al teach a processor and one or more modules executable on the processor

to perform desired tasks (col. 5, lines 6-12. The term "computer programs" here implies that

a computer is needed to perform tasks described in the invention, and a computer includes

a processor).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Thomas et al. Thomas et al's teaching of a processor and one or more modules executable on the processor to perform desired tasks would have helped designers to perform their designing faster and more accurately.

35. As per claim 33, Economides et al do not teach an optimizer module executable on the processor to refine the proposed configuration based on performance.

Thomas et al teach an optimizer module executable on the processor to adjust or refine the performance of oil production (col. 9 63-67; col. 10, lines 1-6).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Thomas et al. Thomas et al's teaching of an optimizer module executable on the processor to adjust or refine the production of oil would have been applied to help refine the proposed configuration based on performance to boost the oil production.

36. As per claim 34, Economides et al do not teach a simulator executable on the processor to determine effect of the proposed configuration on the performance measure.

Thomas et al teach a simulator executable on the processor to determine the performance measure of oil production (col. 6, lines 7-16).

It would have been obvious to one of ordinary skill in the art to combine the teachings of Economides et al and Thomas et al. Thomas et al's teaching of a simulator executable on the processor to determine the performance measure of oil production would have been applied to help determine the effect of the proposed configuration based on performance regarding boosting the oil production.

37. As per claim 35, Economides et al do not teach a storage containing case histories of

installed completions in respective wells, the one or more modules to access the case

histories in generating the proposed configuration.

Thomas et al teach a storage containing case histories and module(s) to access case

histories in generating new proposal for parameters of the oil production (col. 11, lines 1-13).

It would have been obvious to one of ordinary skill in the art to combine the teachings of

Economides et al and Thomas et al. Thomas et al's teaching of a storage containing case

histories and module(s) to access case histories in generating new proposal for parameters

of the oil production would have been applied to help store containing case histories of

installed completions in respective wells, the one or more modules to access the case

histories in generating the proposed configuration which would have helped designers

accelerate the design of oil wells' completions.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Cuong V. Luu whose telephone number is 571-272-8572. The examiner

can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jean Homere, can be reached on (571)272-3780. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306. An inquiry of a

general nature or relating to the status of this application should be directed to the TC2100

Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CVL

Thai Phan
Art unit 2128
8/21/05